REMARKS

The present invention relates to a fuse arrangement suitable for incorporation on the surface of, and hence forming an integral part of, a circuit board. The specification sets out a number of disadvantages of prior art arrangements, stating that one problem is that a damaged or failed circuit on a circuit board may cause the propagation of damage to other circuits carried on the board. This is particularly the case when high density boards are used. It also explains that the use of separate fuse devices is undesirable for a number of reasons including the dimensions of fuse devices and the difficulty in obtaining fuse devices capable of operating reliably in harsh, high temperature operating conditions. The present invention enables a fuse effect to be achieved without the use of a separate fuse device by incorporating a fuse region shaped to define a sharp deviation in current flow in the conductive track of a circuit board.

Nishimura et al discloses a separate fuse device comprising a substrate provided with a conductive track connected to a pair of terminals. The Nishimura et al device is, essentially, just a discrete fuse device, and the present application teaches away from the use of fuse devices, instead requiring the provision of a fuse region in the conductive track of the circuit board. As a result, Nishiura et al does not appear to be of particular relevance.

In order to emphasize the distinctions between the present invention and the Nishimura et al device, claim 1 has been amended to require the provision of a plurality of conductive tracks on the circuit board, at least two of the conductive tracks including a fuse region. Thus, even if the fuse device of Nishimura et al can be regarded as a fuse arrangement of the type referred to in this application, i.e. if Nishimura et al discloses a circuit board, it only discloses the provision of a single conductive track on the circuit board, not a plurality of conductive tracks as required by amended claim 1, and Nishimura et al likewise fails to disclose fuse regions associated with two or more of the tracks. The invention of claim 1, as amended, is thus new and unobvious over Nishimura

et al. The dependent claims are believed to be allowable by virtue of being dependent upon an allowable claim.

Applicant has added a new independent claim 8 based upon original claim 2. New claim 8 recites the fuse region to include a first part and a second part which are angled to one another. The embodiments of the invention described in the application which include this feature are those of Figures 1 and 3-6.

The Examiner has objected to original claim 2 by relying upon the disclosure of Figures 5A to 5C of Nishimura et al. Figure 5A of Nishimura et al does not disclose the provision of first and second parts, which are angled to one another, but rather simply discloses the provision of a region of reduced width. Figures 5B and 5C arguably include first and second parts which are angled to one another, but fail to disclose the provision of these parts as part of a fuse region of reduced cross-sectional area. Rather, the terminals are interconnected by a length of track of substantially uniform width. Accordingly, there is no identifiable fuse region of reduced cross-sectional area, and hence no identifiable part of the conductive track which is located between the terminal and the fuse region.

The other references cited by the Examiner do not appear to be of relevance to the independent claims.

Amended claims 1-7 and new claims 8-12 are believed to be allowable and further favorable action is respectfully requested.

Respectfully submitted,

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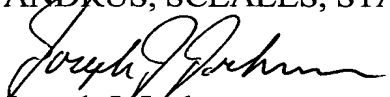

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